Classroom Assessment Practices and Learning Motivation: A Case Study of Chinese EFL Students

ZHENGDON GAN
University of Macau
Macau SAR, China
CONSTANT LEUNG
King's College
London
JINBO HE
Tianjin University
Tianjin, China
HONGHAN NANG
China Pharmaceutical University
Nanjing, China

Classroom-based assessment carried out by teachers has received renewed interest and support in current international educational research and policy, particularly across a number of diverse jurisdictions in locations such as Australia, Hong Kong and England (Author 2, 2009; Author 2 et al. 2018). This renewed interest in classroom-based assessment parallels the paradigmatic movement towards assessment for learning that serves as an integral part of the teaching and learning process (Black & Wiliam, 1998). Contextually bound and contingent to individual teachers' classrooms, classroom assessment is often described as encompassing all activities performed and artefacts used by a teacher to gather relevant information to make well-supported inferences about student learning. In recent years, a large body of literature around L2 teachers' cognitions and experiences with classroom-based assessment has been gradually building up (e.g., Rea–Dickins, 2007; Cheng & Fox, 2017). However, relatively fewer studies have examined what

understandings L2 learners have regarding classroom assessment practices (Purpura, 2016). For example, in general education, a line of research adopting Brookhart's (1997) framework on the role of classroom assessment practices in motivating student learning effort has been conducted to explain variance in student learning attitudes and performance. These studies maintain that classroom assessment is a powerful agent for influencing learning and motivation. Brookhart's theoretical perspective, however, has not been tested in the L2 assessment context, and little is known about the meaning L2 students give to the assessment practices they experience, and particularly how different forms of classroom assessments may influence their learning motivation.

According to Brookhart (1997), aspects of the classroom assessment environment are closely associated with student learning motivation and achievement. In her view, the classroom assessment environment is largely created by teachers who make assessment choices, including types or formats of assessment, establishing purposes for assessment, assigning assessment tasks, appraising performance and providing feedback, and monitoring student learning outcomes (Hao &Johnson, 2013). Brookhart argues that some classroom assessments make students want to study more, try harder or better foster student self-efficacy, and are thus more likely to enhance student motivation by mitigating performance anxiety. This suggests that students may differ in their perceptions of the assessment task, perceptions of their ability to accomplish it, and perceptions of the reasons why they might want to accomplish it. Consequently, classroom assessment practices are believed to be the basis of students' perceptions as to what it is important to learn and where to direct effort in learning (Harlen & Crick, 2003). A number of empirical studies have provided support to Brookhart's framework (e.g., Brookhart, Walsh, & Zientarski, 2006).

Meanwhile, in recent conceptualization of motivational strategies by second language motivation researchers (e.g., Dörnyei & Ushioda, 2010), focus has been placed on the role of

teacher instructional behavior in motivating students to learn. Much overlooked in the L2 literature is how various forms of teacher classroom-based assessments cater for L2 students' motivational processes. Building on Brookhart's theoretical perspective and recent motivational theories, the study reported in this paper aims to address the following questions: 1) To what extent do Chinese university EFL students experience various forms of classroom assessment in their English course? 2) What may characterize these EFL students' motivational disposition related to their English course? 3) What is the relationship between various forms of classroom assessment practice and these EFL students' learning motivation? Building on the previous studies (e.g., Cheng & Fox, 2017; You & Dörnyei, 2016; Brookhart, 1997), we hypothesized: 1) Chinese university EFL students experience student-centred assessment such as self-assessment the least; 2) There is a higher level of endorsement for effort investment compared with other motivational dimensions among these Chinese university EFL students; 3) Classroom assessment practices are closely associated with students' learning motivation, and different classroom assessment practices predict students' learning motivation to a different extent.

THIS STUDY

Motivational Variables as Operationalized in This Study

From a learner's perspective, Harlen and Deakin (2003) expressed three broad categories of motivational variable that were found to be closely related to classroom assessment: 1) 'What I feel and think about myself as a learner.' (i.e., self-efficacy, sense of self as a learner etc.); 2) 'The energy I have for the task.' (i.e., effort, interest in and attitude to subject etc.); 3) 'How I perceive my capacity to undertake the task.' (i.e., locus of control, goal orientation etc.). For example, self-

efficacy concerns one's belief in one's ability to succeed in specific situations or accomplish a task such as “I am sure that I will be successful in English learning”. Effort, also known as intended effort or directed effort, is an element of motivation that has been frequently examined in L2 motivation research (Dörnyei & Ushioda, 2010). Locus refers to whether the learner sees responsibility lying with them or with external factors. Students who perceive the locus of control and responsibility being with the teacher tend to attribute success to external attributions such as help from the teacher rather than to ability and effort. In this study, Harlen and Deakin’s three broad categories of motivational variable were operationalized to target university students’ situation-specific motivational disposition related to their learning in the university English course.

Participants

A total of 204 second-year undergraduate students studying in College English course in mainland China were recruited and completed a questionnaire composed of 21 items concerning classroom assessment practices and another one consisting of 15 items concerning students' EFL course learning motivation. Among the 204 participants, 98 were from a keynote university, 106 were from a non-keynote university; 16 were male, and 181 were female, 7 did not report their gender status; and the age of the participants ranged from 20 to 24 years with M_{age} = 21.37 years, SD_{age} = 0.84 years.

Instruments

The classroom assessment practices questionnaire consisted of five factors measured with 21 items in five-point Likert-scale. These items were developed based on Black and Wiliam’s (1998) constructs related to classroom assessment and a review of relevant empirical studies (e.g., Brown

et al., 2009) in the literature. The initial pool of items was subjected to a review by three experienced researchers in the field of classroom assessment to scrutinize the face and content validity of the initial list. This procedure resulted in a scale of 21 items. This scale of 21 items was then piloted on a class of 20 tertiary EFL students to check for clarity and readability. Some further slight modifications were then made on the wordings of a few items on this scale based on the students' feedback. Specifically, the five factors of the questionnaire are: 1) Self-assessment (5 items, e.g., 'Students evaluated each other's learning performance'); 2) Interactive-informal assessment (5 items, e.g., 'teacher assessed students through observation'); 3) Teacher scaffolding (4 items, e.g., 'Teacher feedback on student work helped students to improve their ways of learning'); 4) In-class diagnostic assessment (3 items, e.g., 'Using textbook-provided materials to assess student learning'); and 5) Subject performance assessment (4 items, e.g., 'Using fill-in-the-blank or short answer questions to assess students').

Students' EFL course learning motivation was measured by the Students' EFL Course Learning Motivation Questionnaire. The items in this questionnaire were adapted from items used in Guilloteaux and Dörnyei 's (2008) Student Motivational State Questionnaire which was designed to gauge secondary EFL students' situation-specific motivational disposition pertaining to their current English course. We removed a few items in Guilloteaux and Dörnyei's questionnaire that seem not applicable to the tertiary English learning context in our study. We also added a couple of items on 'effort investment'. This resulted in a four-factor scale of 15 items. Specifically, the four factors are: 1) L2-classroom anxiety (5 items, e.g., 'I am afraid other students will laugh at me when I speak English'); 2) Attitude towards the English course (4 items, e.g., 'I like English classes this semester'); 3) Effort investment (3 items, e.g., 'I persist in reading English

newspapers, magazines, or novels to improve my English proficiency'); and 4) Linguistic self-confidence (3 items, e.g., 'I am sure that 1 day I will be able to speak English fluently').

Data Analyses

To explore the factor structure of the two instruments used in the current study, the total sample was half-split randomly with one half being used for Exploratory Factor Analysis (EFA; n = 102) and the other half for Confirmatory Factor Analysis (CFA; n = 102). Firstly, by using SPSS 22.0, Exploratory Factor Analysis was conducted with principal component analysis and Promax rotation; and to determine the number of factors, the Kaiser's eigenvalues-greater-than-one criterion (Kaiser 1960) and the scree plot (Raubenheimer 2004) were used; moreover, items showing loadings less than 0.4 (DeVellis 2003) and/or cross-loading on two or more factors with loadings of 0.4 or greater were excluded (Krishnan 2011). After the factor structure was derived from the EFA, Confirmatory Factor Analysis (CFA) was performed by using Mplus 7.4 to confirm the factor structure with the other half sample; and the Weighted Least Squares Means and Variance adjusted (WLSMV) estimator was used to estimate the model parameters as it has demonstrated to be the best estimator for Likert-type data (Wang & Cunningham 2005); moreover, to evaluate the model fitness, the following fit indices with its cut-off values (Hooper, Coughlan, & Mullen, 2008) were reported: the Root Mean Square Error of Approximation (RMSEA, < 0.08 indicates good fit), the Comparative Fit Index (CFI, > 0.90 indicates good fit), and the Tucker-Lewis Index (TLI, > 0.90 indicates good fit), and the weighted root-mean-square residual (WRMR, < 1.0 indicates good fit; Yu, 2002). In addition, it should be noted that the RMSEA often falsely indicates a poor fitting model with a small sample (Kenny, Kaniskan, & McCoach, 2015). Thus, we mainly relied on CFI, TLI and WRMR for evaluating the model fitness.

Then, by using the whole sample (n = 204), the reliabilities of the classroom assessment practices and EFL course learning motivation were evaluated by internal consistency coefficient with the Cronbach's α coefficient, for which, a value greater than 0.6 suggests acceptable reliability. To explore the effects of university type (keynote university vs. non-keynote university) on classroom assessment practices and EFL course learning motivation, multivariate analysis of variance (MANOVA) was used. Pearson Product-Moment Correlation (r) analysis was carried out to examine the relationship between assessment practice and learning motivation factors. Furthermore, a multiple regression analysis (ENTER method) was applied to reveal the effects of the assessment practice factors on student learning motivation with the factors of the assessment practices as predictors and the learning motivation (mean of the four motivation factors) as the dependent variable.

RESULTS

Initial Analysis of the Classroom Assessment Practices Questionnaire

The underlying factor structure of the 21-item Classroom Assessment Practices Questionnaire was firstly explored by EFA (n = 102) which was repeated several times by deleting items with loadings less than 0.4 and items cross-loading on two or more factors. Finally, three items were deleted, and a five-factor model with 18 items was obtained with 64.624% of the total variance explained. Then, by using the remaining half sample (n = 102), CFA was conducted to confirm the first-order five-factor model, and satisfying model fits were found with $\chi^2_{(125)}$= 177.820 (p < .001), RMSEA = 0.065 (90 % CI: 0.041, 0.086), CFI = 0.966, TLI = 0.958, and WRMR = 0.771. A Cronbach's α coefficient of 0.892 was found for the total items selected for assessing classroom assessment practices. Furthermore, the Cronbach's α coefficients for the five factors were: 0.842

for "*Self-assessment*", 0.766 for "*Teacher scaffolding*", 0.732 for "*Interactive-informal assessment*", 0.623 for "*In-class diagnostic assessment*" (3 items), 0.618 for "*Subject performance assessment*" (3 items). Factor loadings for EFA and CFA of the Classroom Assessment Practices Questionnaire and its reliability for each factor are presented in Table 1.

/Insert Table 1 about here/

Initial Analysis of the Students' EFL Course Learning Motivation Questionnaire

Following the same procedure for exploring the factor structure of the Classroom Assessment Practices Questionnaire, the underlying factor structure of the 15-item Students' EFL Course Learning Motivation Questionnaire was also firstly explored by EFA (n = 102), and a four-factor 15-item model was obtained with 56.496% of the total variance being explained. Then, CFA was conducted to confirm the first-order four-factor model with the remaining half sample (n = 102), and satisfying model fits were found with $\chi^2_{(84)}$= 146.174 (p < .001), RMSEA = 0.086 (90 % CI: 0.062, 0.110), CFI = 0.921, TLI = 0.901, and WRMR = 0.891. A Cronbach's α coefficient of 0.727 was found for the total items selected for assessing learning motivation. Furthermore, the Cronbach's α coefficients for the four factors were: 0.756 for "*L2-classroom anxiety*", 0.616 for "*Linguistic self-confidence*", 0.697 for "*Attitude towards the English course*", and 0.698 for "*Effort investment*". Factor loadings for EFA and CFA of the Students' EFL Course Learning Motivation Questionnaire and its reliability for each factor are presented in Table 2.

/Insert Table 2 about here/

Differences in Classroom Assessment Practices and Students' Learning Motivation between the Keynote and Non-Keynote University

Table 3 shows the results of MANOVAs conducted for assessment practices and learning motivation by university type. For the effect of university type on assessment practices, significant multivariate main effect was found, $F(5,178) = 5.809$, $p < .01$(Wilks' $\lambda = 0.860$, $\eta^2 = .140$). Furthermore, univariate results showed this effect to be significant for *Interactive-informal assessment*, $F(1,182) = 4.40$, $p < .05$, and *In-class diagnostic assessment*, $F(1,182) = 19.92$, $p < .01$, with a medium (0.65) effect size; but not for *Self-assessment*, $F(1,182) = 1.24$, $p > .05$, *Teacher scaffolding*, $F(1,182) = 2.08$, $p > .05$, and *Subject performance assessment*, $F(1,182) = 0.57$, $p > .05$.

For the effect of university type on students' EFL course learning motivation, a significant main effect was also revealed, $F(4,176) = 2.87$, $p < .05$ (Wilks' $\lambda = 0.939$, $\eta^2 = .061$). Furthermore, univariate results showed this effect to be significant for *Effort investment*, $F(1,179) = 4.35$, $p < .05$, and *Linguistic self-confidence*, $F(1,179) = 9.10$, $p < .01$, with a small effect size (0.31 and 0.45); but not for *L2-classroom anxiety*, $F(1,179) = 0.46$, $p > .05$, and *Attitude towards the English course*, $F(1,179) = 0.002$, $p > .05$.

/Insert Table 3 here/

Relationship between Classroom Assessment Practices and Students' Learning Motivation

As can be seen in Table 4, *Self-assessment, Interactive-informal assessment,* and *Teacher scaffolding* were found to be significantly and positively correlated with all four motivational factors. *In-class diagnostic assessment* was found significantly and positively correlated with three positive motivational factors (i.e., *Attitude towards the English course*, *Effort investment*, and *Linguistic self-confidence*), but not with L2 classroom anxiety. *Subject performance assessment*

was found only significantly and positively correlated with *L2-classroom anxiety* and *Attitude towards the English course* but not with *Effort investment*, and *Linguistic self-confidence.*

/Insert Table 4 here/

The results of multiple regression analysis (Model 1) by using all assessment practices to predict learning motivation showed that *Self-assessment* (β = .212, p = .01), *Interactive-informal assessment* (β = .166, p < .05), and *In-class diagnostic assessment* (β = .153, p = .05) could significantly and positively predict students' learning motivation, whereas *Teacher scaffolding* (β = .138, p > .05) and *Subject performance assessment* (β = -.065, p > .05) could not; and the R^2 was 0.219, indicating that 21.9% of the variance in students' learning motivation could be explained by these five assessment practices predictors. Furthermore, by using only the three significant assessment practices predictors as independent variables, regression results (Model 2) showed that *Self-assessment* (β = .254, p < .01), *Interactive-informal assessment* (β = .204, p < .01), and *In-class diagnostic assessment* (β = .146, p < .05) were still significant, with the regression model presenting a slightly decreased R^2 (i.e., 0.205), indicating that *Self-assessment*, *Interactive-informal*, and *In-class diagnostic assessment* could have significant influence on students' learning motivation. Details of the two regression models can be found in Table 5.

/Insert Table 5 here/

DISCUSSION

The findings revealed that the participants experienced four types of assessment practice considerably frequently, i.e., *In-class diagnostic assessment*, *Teacher scaffolding*, *Interactive-*

informal assessment, and *Subject performance assessment*, whereas *Self-assessment* emerged to be used the least. Note that teacher-directed *Subject performance assessment* is the only type of assessment on which the Non-Key University students obtained a higher mean score. These results suggest that Chinese university EFL students generally experience student-centred assessment the least. With regard to students' motivational disposition in the English course, there was generally marginally moderate endorsement for *L2-classroom anxiety, Attitude towards the English course*, and *Linguistic self-confidence. Effort investment* obtained the highest mean score within either Keynote or Non-Keynote University. These results suggest a higher level of endorsement for *effort investment* in the Chinese university students compared with other motivational dimensions. MANOVA results showed that students from the keynote university were higher on mean scores of all the assessment practices except *subject performance assessment*, and significantly higher on *interactive-informal assessment* and *in-class diagnostic assessment*, suggesting that assessment practices in the keynote university were likely to be more facilitative to student learning probably as a result of being equipped with better teaching and learning resources and higher quality teaching staff. In terms of learning motivation, students from the keynote university reported a lower level of *L2-classroom anxiety* and the same level of *Attitude towards the English course*, but significantly higher level of both *effort investment* and *linguistic self-confidence* in their EFL course. One possible interpretation of these motivational results is that keynote universities across China usually recruit higher quality students than do non-keynote universities, and that higher quality students may thus have a better linguistic foundation to draw on when continuing their English learning in the university EFL course.

This study is the first of its kind in L2 education to investigate the association between motivational processes and different forms of EFL classroom assessment practice. Our analyses

revealed that the positive correlations between four classroom assessment practices (i.e., *self-assessment*, *teacher scaffolding*, *in-class diagnostic assessment*, and *interactive-informal assessment*) and the three positive motivational factors were stronger than those between *subject performance assessment* and these three motivational factors, suggesting that teacher-controlled subject performance assessment might be less effective in cultivating and sustaining students' motivation to learn. Multiple regression analysis further revealed that *Self-assessment*, *Interactive-informal assessment*, and *In-class diagnostic assessment* significantly positively predicted students' learning motivation in the English course. This is probably because these types of assessment practices may help to make students' learning needs better known than other forms of assessment. As such, daily teacher-student interactive practices such as peer student self-assessment, teacher oral questioning and informal observation, and in-class teacher monitoring can potentially catalyse changes in students' motivational processes and can thus possibly have a positive impact on student learning behaviour. For example, the more opportunities EFL students have to exercise self-assessment, the more likely they are to develop positive attitude toward English learning, and the more linguistically confident they tend to judge themselves to be. In other words, student-student or teacher-student dialogic interaction can be considered a primary source of formative learning potential in the EFL classroom. The result is particularly encouraging given the tendency in the literature to prioritize the 'formal' and the 'procedural' assessment activities and to underplay the observation-driven approaches to assessment in everyday classroom practices. Note that the result that self-assessment was reported to be least experienced in this study suggests that teacher implementation of student-led assessment practices appeared to be limited in Chinese EFL classrooms. Chinese EFL teachers thus need to play an active part in the development and monitoring of student self-assessments, most especially for students who have a low level of

learning motivation, and create opportunities for them to develop skills in self- and peer-assessment within collaborative working opportunities in classrooms.

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CONCLUSION

This study adds to our understanding of how classroom assessment is undertaken in Chinese EFL classrooms and how it can be effective in enhancing student learning motivation. In the main, our three hypotheses have received support. The most striking finding of the study is that it provides empirical evidence pertaining to the prominent role of *Self-assessment*, *Interactive-informal assessment*, and *In-class diagnostic assessment* in shaping students' motivational climate in EFL classrooms, thus raising significant implications pertaining to alignment of teaching, learning, and assessment. The results suggest that there is a pressing need for EFL teachers to be aware of the utility of optimal assessment practices that lead to most desirable outcomes of student motivation and learning. Specifically, this requires teachers to reflect on what classroom assessment practices best foster student active involvement, autonomy and responsibility for their learning. They need to be encouraged to use the assessment method not simply as a tool of measuring student achievement at the end of a unit or a semester of study but as a process that can stimulate students' motivation to learn through engaging students in learning dialogues with one another and with their teachers. This study also suggests that there is a need for EFL teachers to be better aware of the value of using *Self-assessment*, *Interactive-informal assessment*, and *In-class diagnostic assessment* to support students to become self-regulating learners and take the ownership of their learning. Consequently, work to support EFL teachers' professional development needs to be designed and provided if they are expected to change their view of assessment as something that is being done to students to something that is being done with and for the students. It needs to be

pointed out that two limitations of the current study should be considered in future studies. First, a relatively small sample size was used for EFA and CFA analyses in the study. Future investigations should test the claims made here using a larger sample size. Second, the measures of classroom assessment practices and students' learning motivation were all generated from self-report instruments which might involve response biases. Future investigations might make use of qualitative observational research in classrooms to corroborate the statistical evidence reported in this paper.

THE AUTHORS

Zhengdong Gan is an associate professor in the Faculty of Education at the University of Macau. His research interests include second language classroom assessment practices, the psycholinguistics of second language acquisition and individual differences in language learning, and second language teacher education.

Constant Leung is Professor of Educational Linguistics in the School of Education, Communication and Society, King's College London. His research interests include additional/second language teaching and assessment, language policy, and teacher professional development. He is joint-editor of Language Assessment Quarterly, Editor of Research Issues of TESOL Quarterly, and serves as a member of the Editorial Boards of Australian Review of Applied Linguistics, Language and Education, and the Modern Language Journal. He is a Fellow of the Academy of Social Sciences (UK).

Jinbo He got his Ph.D. degree from the Faculty of Education, University of Macau, and now he is an associate professor in the School of Education, Tianjin University. His research mainly focuses on quantitative research methodology, e.g., structural equation modeling.

Honghan Nang is now an associate professor in the Foreign Languages Department of China Pharmaceutical University (CPU). He specializes in linguistics and applied linguistics and has published over 10 books and some papers on English teaching and learning in China. His major research interests are discourse analysis, pragmatics and sociolinguistics.

REFERENCES

Author 2 (2009)

Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5, 7-74. doi.org/10.1080/0969595980050102.

Brookhart, S. M. (1997). A theoretical framework for the role of classroom assessment in motivating student effort and achievement. *Applied Measurement in Education*, 10, 161–180. doi.org/10.1207/s15324818ame1002_4

Brookhart, S. M., Walsh, J. M. & Zientarski, W. A. (2006). The dynamics of motivation and effort for classroom assessments in middle school science and social studies. *Applied Measurement in Education,* 19, 151–184. doi.org/10.1207/s15324818ame1902_5

Brown, G. T., Irving, S. E., Peterson, E. R. & Hirschfeld, G. H. (2009). Use of interactive-informal assessment practices: New Zealand secondary students' conceptions of assessment. *Learning and Instruction,* 19, 97–111. doi.org/10.1016/j.learninstruc.2008.02.003

Cheng, L.-Y., & Fox, J. (2017). *Assessment in the Language Classroom*. London: Palgrave.

Dörnyei, Z., & Ushioda, E. (2010). *Teaching and researching motivation*(2nd ed.). Harlow, England: Longman.

Guilloteaux, M.J. & Dörnyei, Z. (2008). Motivating language learners: a classroom-oriented investigation of the effects of motivational strategies on student motivation. *TESOL Quarterly,* 42, 55-77. doi.org/10.1002/j.1545-7249.2008.tb00207.x

Harlen, W. & Crick, R. D. (2003). Testing and motivation for learning. *Assessment in Education,*10,169–207. doi.org/10.1080/0969594032000121270

Hao, S. & Johnson, R. L. (2013). Teachers' classroom assessment practices and fourth-graders' reading literacy achievements: An international study. *Teaching and Teacher Education,*

29, 53-63. doi.org/10.1016/j.tate.2012.08.010

Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. Articles, 2.

Purpura, J. E. (2016). Second and foreign language assessment. *Modern Language Journal*, 100, 190-208. doi: 10.1111/modl.12308

Rea-Dickins, P. (2004). Understanding teachers as agents of assessment. *Language Testing, 21*, 249–258. doi.org/10.1191/0265532204lt283ed

Wang, W. C. & Cunningham, E. G. (2005). Comparison of alternative estimation methods in confirmatory factor analyses of the General Health Questionnaire. *Psychological Reports*, 97, 3–10. doi.org/10.2466/pr0.97.1.3-10

You, C. & Dörnyei, Z. (2016). Language learning motivation in China: Results of a large-scale stratified survey. *Applied Linguistics,* 37, 495-519. doi:10.1093/applin/amu046

Yu, C.Y. (2002). *Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes*. Doctoral dissertation, University of California.

Table 1. Factor loadings of EFA and CFA, and reliability for the classroom assessment practices questionnaire

Items of the classroom assessment practices questionnaire	EFA					CFA	Reliability
Factor 1. Self-assessment							0.842
1. Students used concept mapping to assess their learning.	**0.846**	-0.165	0.107	-0.194	0.113	0.658	
2. Students used portfolios to assess their learning progress.	**0.843**	0.032	-0.026	-0.040	0.051	0.778	
3. Students decided on and shared their learning objectives and goals.	**0.696**	0.011	0.344	-0.126	0.047	0.682	
4. Students evaluated each other's learning performance.	**0.639**	0.234	-0.148	0.260	-0.085	0.785	
5. Students evaluated their own learning performance.	**0.586**	0.262	-0.104	0.264	-0.176	0.968	
Factor 2. Teacher scaffolding							0.766
11. Teacher helped students understand how to improve their assignments.	0.143	**0.832**	-0.104	-0.035	0.011	0.815	
12. Teacher feedback on student work helped them to improve their ways of learning.	0.194	**0.761**	0.026	-0.247	0.005	0.787	
13. Teacher checked students' understanding of the course content through classroom questioning.	-0.271	**0.728**	0.310	-0.070	-0.031	0.642	
14. Teacher feedback on student work helped to clarify things they hadn't fully understood.	0.364	**0.533**	0.010	0.029	0.104	0.688	
Factor 3. Interactive-informal assessment							0.732
6. Teacher evaluated oral questions from students.	-0.038	0.008	**0.864**	0.003	-0.042	0.658	
7. Teacher talked to the students about their learning progress.	0.101	0.202	**0.697**	-0.013	0.143	0.636	
8. Teacher assessed students through observation.	0.279	-0.099	**0.618**	0.342	-0.167	0.841	
Factor 4. In-class diagnostic assessment							0.623
15. Teacher used reading-aloud or dictation to assess students' learning.	0.134	-0.329	0.100	**0.859**	0.015	0.892	
16. Teacher administered announced quizzes.	-0.106	0.012	-0.038	**0.716**	0.270	0.492	
17. Using textbook-provided materials to assess student learning.	-0.323	0.377	0.100	**0.486**	-0.006	0.521	
Factor 5. Subject performance assessment							0.618
18. Using essay-writing to assess students.	-0.008	-0.017	-0.040	0.169	**0.875**	0.815	
19. Using translation to assess students.	-0.081	0.023	0.266	0.077	**0.572**	0.870	
21. Using Fill-in-the-blank or short answer questions to assess students.	0.310	0.051	-0.198	0.003	**0.528**	0.573	
Percentage of variance explained based on EFA (%)	29.602	14.442	7.210	7.098	6.273		0.892

Note: Item loadings of EFA greater than .40 are in bold type. EFA = Exploratory Factor Analysis; CFA = Confirmatory Factor Analysis.

Table 2. Factor loadings of EFA and CFA, and reliability for the students' EFL course learning motivation questionnaire

Items of the students' EFL course learning motivation questionnaire	EFA				CFA	Reliability
Factor 1. L2-classroom anxiety						0.756
1. I get very worried if I make mistakes during English class.	**0.803**	0.026	0.028	-0.231	0.772	
2. I am afraid other students will laugh at me when I speak English.	**0.749**	-0.030	0.208	-0.174	0.877	
3. I am worried about my ability to do well in English this semester.	**0.660**	0.060	-0.200	0.285	0.681	
4. Improving my English is a burden for me this semester.	**0.637**	-0.154	-0.143	0.256	0.582	
5. I feel nervous in English listening and speaking classes.	**0.487**	0.033	0.336	-0.087	0.699	
Factor 2. Linguistic self-confidence						0.616
13. I volunteer to seek speaking opportunities outside class to enhance my spoken English.	0.102	**0.878**	-0.093	0.044	0.991	
14. I often volunteer to do speaking presentations in English classes.	0.042	**0.753**	-0.124	0.061	0.504	
15. I am sure that 1 day I will be able to speak English fluently.	-0.221	**0.723**	0.005	-0.086	0.324	
Factor 3. Attitude towards the English course						0.697
6. In English classes this semester, we are learning things that will be useful in the future.	-0.031	-0.310	**0.775**	0.153	0.721	
7. I enjoy my English lessons this semester because what we do is neither too hard nor too easy.	0.013	-0.095	**0.664**	-0.077	0.650	
8. I like English classes this semester.	-0.146	0.347	**0.581**	0.056	0.861	
9. I want to work hard in English to make my teacher happy.	0.213	0.226	**0.508**	0.028	0.714	
Factor 4. Effort investment						0.698
10. I persist in listening to radio English programs or watch English movies to enhance my English.	-0.122	-0.067	0.149	**0.811**	0.755	
11. I persist in reading English newspapers, magazines, or novels to improve my English proficiency.	0.053	0.074	-0.095	**0.790**	0.709	
12. I feel I am making progress in English this semester as a result of persistent effort.	0.061	0.135	0.368	**0.443**	0.740	
Percentage of variance explained based on EFA (%)	21.799	16.694	9.940	8.062		0.727

Note: Item loadings of EFA greater than .40 are in bold type. EFA = Exploratory Factor Analysis; CFA = Confirmatory Factor Analysis.

Table 3. Results of MANOVAs: classroom assessment practices and student learning motivation by university

	Factors	Keynote uni. *Mean(SD)*	Non-keynote uni. *Mean(SD)*	*F*	*Cohen's d*
Assessment	*Self-assessment*	3.20(0.83)	3.06(0.80)	1.24	0.16
Wilks' λ = 0.860	*Interactive-informal assessment*	3.87(0.77)	3.62(0.81)	4.40*	0.31
$F(5,178) = 5.809$**	*Teacher scaffolding*	3.93(0.62)	3.79(0.64)	2.08	0.21
η^2=.140	*In-class diagnostic assessment*	4.07(0.57)	3.62(0.76)	19.92**	0.67
	Subject performance assessment	3.71(0.69)	3.78(0.68)	0.57	0.11
Motivation	*L2-classroom anxiety*	3.05(0.83)	3.13(0.65)	0.46	0.10
Wilks' λ = 0.939	*Attitude towards the English course*	3.18(0.70)	3.18(0.59)	0.002	0.01
$F(4,176) = 2.87$*	*Effort investment*	3.41(0.74)	3.20(0.56)	4.35*	0.31
η^2=.061	*Linguistic self-confidence*	3.28(0.66)	2.98(0.64)	9.10**	0.45

Notes: * $p < .05$, ** $p < .01$.

Table 4. Correlation between classroom assessment practices and student learning motivation

	Classroom assessment practices				
Student learning motivation	*Self-assessment*	*Interactive-informal assessment*	*Teacher scaffolding*	*In-class diagnostic assessment*	*Subject performance assessment*
L2-classroom anxiety	.270**	.163*	.189**	.125	.161*
Attitude towards the English course	.304**	.254**	.328**	.222**	.161*
Effort investment	.206**	.260**	.247**	.229**	.102
Linguistic self-confidence	.247**	.185*	.232**	.168*	.114

Notes: * $p < .05$, ** $p < .01$.

Table 5. Regression models reporting unstandardized (*B*), standardized beta's (β), standard errors (*SE*), *t* and *p* values for predictors of learning motivation

Predictor	Student learning motivation				
Model 1	*B*	*SE*	β	*t*	*p*
Self-assessment	.120	.046	.212	2.605**	.010
Interactive-informal assessment	.097	.047	.166	2.053*	.042
Teacher scaffolding	.102	.069	.138	1.492	.137
In-class diagnostic assessment	.100	.051	.153	1.972*	.050
Subject performance assessment	-.045	.055	-.065	-.814	.417
$R^2 = 0.219$					
Model 2 (only significant predictors in Model 1 included)	*B*	*SE*	*b*	*t*	*p*
Self-assessment	.144	.041	.254	3.515**	.001
Interactive-informal assessment	.120	.044	.204	2.708**	.007
In-class diagnostic assessment	.095	.047	.146	2.029*	.044
$R^2 = 0.205$					

Notes: * $p \leq .05$, ** $p \leq .01$.